



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2019-0675; Product Identifier 2019-NM-068-AD;

Amendment 39-19815; AD 2019-24-12]

RIN 2120-AA64

Airworthiness Directives; De Havilland Aircraft of Canada Limited (Type Certificate Previously Held by Bombardier, Inc.) Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain De Havilland Aircraft of Canada Limited Model DHC-8-401 and -402 airplanes. This AD was prompted by a report that certain fuselages were delivered with nonconforming keel tension fittings and stringer end fittings. This AD requires a detailed visual inspection of stringer end fittings and keel fittings for loose or working fasteners, signs of wear, and corrosion, and repair if necessary; and a general visual inspection of the keel tension fitting and stringer end fittings, as applicable, and repairs and replacement of the keel and stringer end fittings if necessary. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For Bombardier, Inc., or De Havilland Aircraft of Canada Limited service information identified in this final rule, contact De Havilland Aircraft of Canada Limited, Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5, Canada; phone: 416-375-4000; fax: 416-375-4539; email: thd@dehavilland.com; Internet: <https://dehavilland.com>. You may view this service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0675.

Examining the AD Docket

You may examine the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0675; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the regulatory evaluation, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Andrea Jimenez, Aerospace Engineer, Airframe and Propulsion Section, FAA, New York ACO Branch, 1600 Stewart

Avenue, Suite 410, Westbury, NY 11590; phone: 516-228-7330; fax: 516-794-5531;
email: 9-avs-nyaco-cos@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian AD CF-2019-06, dated February 18, 2019 (also referred to as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for certain De Havilland Aircraft of Canada Limited Model DHC-8-401 and -402 airplanes. You may examine the MCAI in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0675.

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain Bombardier, Inc., Model DHC-8-401 and -402 airplanes. The NPRM published in the Federal Register on September 9, 2019 (84 FR 47170). The NPRM was prompted by a report that certain fuselages were delivered with non-conforming keel tension fittings and stringer end fittings. The NPRM proposed to require a detailed visual inspection of stringer end fittings and keel fittings for loose or working fasteners, signs of wear, and corrosion, and repair if necessary; and a general visual inspection of the keel tension fitting and stringer end fittings, as applicable, and repairs and replacement of the keel and stringer end fittings if necessary. The FAA is issuing this AD to address non-conforming keel tension fittings and stringer end fittings, which could lead to premature cracking and corrosion in several locations and compromise the structural integrity of the fuselage joints. See the MCAI for additional background information.

Comments

The FAA gave the public the opportunity to participate in developing this final rule. The following presents the comments received on the NPRM and the FAA's response to each comment.

Request to Update the Design Approval Holder (DAH) for the Affected Airplanes

Horizon Air requested that the FAA update the DAH for the affected airplanes. Horizon Air pointed out that De Havilland Aircraft of Canada Limited is now the DAH for the Model DHC-8-401 and -402 airplanes.

The FAA agrees with the commenter for the reasons provided and has updated this final rule accordingly.

Request to Include Revised Service Information and Credit for Previous Revision

Horizon Air requested that the FAA update the final rule to include revised service information. Horizon Air mentioned that De Havilland Aircraft of Canada Limited has issued Service Bulletin 84-53-75, Revision A, dated August 2, 2019. Horizon Air also requested that the FAA give credit for accomplishment of the required actions prior to the effective date of this AD using Bombardier Service Bulletin 84-53-75, dated August 29, 2018.

The FAA agrees with the commenter for the reasons provided and has updated this final rule to refer to De Havilland Aircraft of Canada Limited Service Bulletin 84-53-75, Revision A, dated August 2, 2019. The FAA has determined that no additional work is required for airplanes on which the actions specified in Bombardier Service Bulletin 84-53-75, dated August 29, 2018, have already been done. The FAA has added paragraph (k) to this AD to provide credit for accomplishment of the required actions

prior to the effective date of this AD using Bombardier Service Bulletin 84-53-75, dated August 29, 2018.

Conclusion

The FAA reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this final rule with the changes described previously and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

The FAA also determined that these changes will not increase the economic burden on any operator or increase the scope of this final rule.

Related Service Information under 1 CFR Part 51

De Havilland Aircraft of Canada Limited has issued the following service information.

- Bombardier Service Bulletin 84-53-74, dated August 29, 2018. This service information describes procedures for a general visual inspection of the keel and stringer end fittings, repair, and replacement of the keel and stringer end fittings.
- Service Bulletin 84-53-75, Revision A, dated August 2, 2019. This service information describes procedures for a detailed visual inspection of stringer end fittings and keel fittings, in the passenger compartment at stations X373.15 and X428.50, for loose or working fasteners, signs of wear, and corrosion.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Costs of Compliance

The FAA estimates that this AD affects 1 airplane of U.S. registry. The FAA estimates the following costs to comply with this AD:

Estimated costs for required actions

Labor cost	Parts cost	Cost per product	Cost on U.S. operators
33 work-hours X \$85 per hour = \$2,805	\$0	\$2,805	\$2,805

The FAA has received no definitive data that would enable the agency to provide cost estimates for the on-condition replacements specified in this AD.

Estimated costs of on-condition replacements

Labor cost	Parts cost	Cost per product
46 work-hours X \$85 per hour = \$3,910	\$54,649	\$58,559

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by

prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to transport category airplanes and associated appliances to the Director of the System Oversight Division.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

2019-24-12 De Havilland Aircraft of Canada Limited (Type Certificate Previously Held by Bombardier, Inc.): Amendment 39-19815; Docket No. FAA-2019-0675; Product Identifier 2019-NM-068-AD.

(a) Effective Date

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to De Havilland Aircraft of Canada Limited (Type Certificate Previously Held by Bombardier, Inc.) Model DHC-8-401 and -402 airplanes, certificated in any category, serial numbers 4327, 4330, 4337, 4342, 4350, 4352, 4362, 4367, 4372, 4375, 4376, 4378, 4383, 4384, 4385, 4388, 4391, 4392, 4396, and 4397.

(d) Subject

Air Transport Association (ATA) of America Code 53, Fuselage.

(e) Reason

This AD was prompted by a report that certain fuselages were delivered with non-conforming keel tension fittings and stringer end fittings. The FAA is issuing this AD to address non-conforming keel tension fittings and stringer end fittings which could lead to premature cracking and corrosion in several locations and compromise the structural integrity of the fuselage joints.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Detailed Visual Inspection of the Stringer End Fittings and Keel Fittings and Repair

Within 8,000 flight hours or 5 years after the effective date of this AD, whichever occurs first: Do a detailed visual inspection of the stringer end fittings and keel fittings at fuselage stations X373.15 and X428.50 for loose and working fasteners, signs of wear, and corrosion in accordance with paragraph 3.B. of the Accomplishment Instructions of De Havilland Aircraft of Canada Limited Service Bulletin 84-53-75, Revision A, dated August 2, 2019. If any loose or working fasteners, signs of wear, or corrosion are found during any inspection required by this paragraph, before further flight, repair using a method approved by the Manager, New York ACO Branch, FAA; or Transport Canada Civil Aviation (TCCA); or De Havilland Aircraft of Canada Limited's TCCA Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature. Doing the actions specified in Bombardier Service Bulletin 84-53-66 does not constitute compliance with the actions specified in this paragraph.

(h) General Visual Inspection, Repair, and Replacement of the Stringer End Fittings and Keel Fittings

Except for airplanes identified in paragraph (i) of this AD: Before accumulating 40,000 total flight cycles or within 12 months after the effective date of this AD, whichever occurs later, do the inspections specified in paragraphs (h)(1) and (2) of this AD.

(1) Do a general visual inspection of the keel tension fittings at fuselage stations X373.15 and X428.50 for non-conformance conditions (oversize, elongated, and off angle conditions) in accordance with paragraph 3.B. of the Accomplishment Instructions of Bombardier Service Bulletin 84-53-74, dated August 29, 2018. If any non-conformance condition is found, before further flight, replace the keel tension fittings at fuselage stations X373.15 and X428.50, including doing all applicable repairs, in accordance with paragraph 3.B. of the Accomplishment Instructions of Bombardier Service Bulletin 84-53-74, dated August 29, 2018; except where Bombardier Service Bulletin 84-53-74, dated August 29, 2018, specifies to contact Bombardier, before further flight, repair using a method approved by the Manager, New York ACO Branch, FAA; or TCCA; or De Havilland Aircraft of Canada Limited's TCCA DAO. If approved by the DAO, the approval must include the DAO-authorized signature.

(2) Do a general visual inspection of the stringer end fittings at fuselage stations X373.15 and X428.50 for non-conformance conditions (i.e., excessive depth Hi-Lite fastener hole chamfers and installation too close to the fillet radius), in accordance with paragraph 3.B. of the Accomplishment Instructions of Bombardier Service Bulletin 84-53-74, dated August 29, 2018. If any non-conformance condition is found, before further flight, replace the stringer end fittings at fuselage stations X373.15 and X428.50,

including doing all applicable repairs and an eddy current or fluorescent dye penetrant inspection for cracks of all blended areas and fasteners, in accordance with paragraph 3.B. of the Accomplishment Instructions of Bombardier Service Bulletin 84-53-74, dated August 29, 2018; except where Bombardier Service Bulletin 84-53-74, dated August 29, 2018, specifies to contact Bombardier, before further flight, repair using a method approved by the Manager, New York ACO Branch, FAA; or TCCA; or De Havilland Aircraft of Canada Limited's TCCA DAO. If approved by the DAO, the approval must include the DAO-authorized signature.

(i) Rework for Airplanes that have Accomplished Bombardier Service Bulletin 84-53-69 Prior to the Effective Date of this AD

For airplanes on which the actions specified in Bombardier Service Bulletin 84-53-69 have been accomplished prior to the effective date of this AD: Before accumulating 40,000 total flight cycles or within 12 months after the effective date of this AD, whichever occurs later, do a general visual inspection of the stringer end fittings at fuselage stations X373.15 and X428.50 for non-conformance conditions (i.e., excessive depth Hi-Lite fastener hole chamfers and installation too close to the fillet radius) in accordance with paragraph 3.B. of the Accomplishment Instructions of Bombardier Service Bulletin 84-53-74, dated August 29, 2018. If any non-conformance condition is found, before further flight, replace the stringer end fittings at fuselage stations X373.15 and X428.50, including doing all applicable repairs and an eddy current or fluorescent dye penetrant inspection for cracks of all blended areas and fasteners, in accordance with paragraph 3.B. of the Accomplishment Instructions of Bombardier Service Bulletin 84-53-74, dated August 29, 2018; except where Bombardier Service Bulletin 84-53-74, dated August 29, 2018, specifies to contact Bombardier, before further flight, repair using

a method approved by the Manager, New York ACO Branch, FAA; or TCCA; or De Havilland Aircraft of Canada Limited's TCCA DAO. If approved by the DAO, the approval must include the DAO-authorized signature.

(j) Corrective action for Eddy Current and Fluorescent Dye Penetrant Inspections

If, during any eddy current or fluorescent dye penetrant inspection required by paragraph (h)(2) or (i) of this AD, any cracking is found, before further flight, repair using a method approved by the Manager, New York ACO Branch, FAA; or TCCA; or De Havilland Aircraft of Canada Limited's TCCA DAO. If approved by the DAO, the approval must include the DAO-authorized signature.

(k) Credit for Previous Actions

This paragraph provides credit for actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 84-53-75, dated August 29, 2018.

(l) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, New York ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: 516-228-7300; fax: 516-794-5531. Before using any approved AMOC, notify your appropriate principal

inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(2) *Contacting the Manufacturer:* For any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, New York ACO Branch, FAA; or TCCA; or De Havilland Aircraft of Canada Limited's TCCA DAO. If approved by the DAO, the approval must include the DAO-authorized signature.

(m) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian AD CF-2019-06, dated February 18, 2019, for related information. This MCAI may be found in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0675.

(2) For more information about this AD, contact Andrea Jimenez, Aerospace Engineer, Airframe and Propulsion Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: 516-228-7330; fax: 516-794-5531; email: 9-avs-nyaco-cos@faa.gov.

(3) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (n)(3) and (4) of this AD.

(n) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) Bombardier Service Bulletin 84-53-74, dated August 29, 2018.

(ii) De Havilland Aircraft of Canada Limited Service Bulletin 84-53-75, Revision A, dated August 2, 2019.

(3) For Bombardier, Inc., or De Havilland Aircraft of Canada Limited service information identified in this AD, contact De Havilland Aircraft of Canada Limited, Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5, Canada; phone: 416-375-4000; fax: 416-375-4539; email: thd@dehavilland.com; Internet: <https://dehavilland.com>.

(4) You may view this service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email fedreg.legal@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Des Moines, Washington, on November 27, 2019.

Michael Kaszycki,
Acting Director,
System Oversight Division,
Aircraft Certification Service.

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